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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,407

07/24/2006

Susumu Takumai

YAMA:132

1632

37013 7590 07/21/2009
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EXAMINER

FAULK, DEVONA E

ART UNIT

PAPER NUMBER

2614

MAIL DATE

DELIVERY MODE

07/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,407	Applicant(s) TAKUMAI, SUSUMU	
	Examiner DEVONA E. FAULK	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,6,7 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Remarks

1. Applicant's arguments, regarding claim 1, filed 4/9/09, with respect to the rejection(s) of claim(s) 1 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 112 2nd..
2. Claims 2-8 were objected to as being dependent upon a rejected claim in the previous office action and indicated as allowable if written in independent form.
3. The applicant has written claims 2,3,6,7 and 8 in independent form. Claims 3-7 are in allowable form. Claims 2 and 8 have 112 issues that have to be addressed.
4. Claims 9-16 are cancelled.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1,2,4,5 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "...The applicant has amended claim 1 to further clarify the claim language. Claim 1 now states that the storage portion stores a signal level of the test sound collected by the microphone and sweep angles of the audio beams when the audio beams corresponding to the test sounds are output from the speaker array therein so as to correlate with each other. " What is correlating with each other? The beams? The test signals? The beams to the test signals?

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Clarity is needed. Claim 2(and dependent claims 4 and 5) recites "...wherein the beam setting portion sets a sweep angle of a peak where the signal level of the test sound is the highest, as a beam output angle of a center channel of the multi-channel surround sound. ". There seems to be a disconnect between the part of the limitation before the comma after highest and the part recited after the comma. Something seems to be missing. The examiner is not clear as to what the applicant is trying to claim in the limitation. Claim 8 recites "...wherein the speaker array output audio beams based on a test audio signal having no correlation and limited to a band where beams can be formed.". The test signal having no correlation to what? Clarity is needed.

Allowable Subject Matter

6. Claims 3,6,7 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 3,6 and 7 , prior art Hooley et al. (US 2006/0153391) discloses a speaker array apparatus, comprising: a speaker array that has a plurality of speakers for outputting audio beams based on a test audio signal (sound projector 100, Figure 3 includes a plurality of transducers and receives test signal from pulse generator 1000; page 2, ¶ 0038 and page 4, ¶ 0058- ¶ 0059); a test sound sweep portion that sweeps with the audio beams (signal from pulse generator; 1020; Figure 3; ¶ 0058- ¶ 0059); a microphone that is placed in a listening position and collects a test sound including direct sounds and reflected sounds of the audio beams output from the speaker array (mic 120 located on the sound projector; ¶ 0058- ¶ 0059) ;

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a storage portion that stores a signal level of the test sound collected by the microphone, and sweep angles with which audio beams corresponding to the test sound are output (signal processor 1020, Figure 3; ¶ 0058- ¶ 0059) ; a selection portion that selects a plurality of peaks of the signal level based on the signal level of the test sound stored in the storage portion (signal processor 1020, Figure 3; ¶ 0058- ¶ 0059); and a beam setting portion that output audio beams of channels of a multi-channel surround-sound respectively (signal processor 1020, Figure 3; ¶ 0058- ¶ 0059; abstract). Prior art Sawabei (JP 2005-064746).

discloses a beam setting portion sets the sweep angles of selected plurality of peaks as beam output angles (beam control part 12, ¶ 0043- ¶ 0048).

Regarding claim 3, the prior art or combination thereof fails to disclose or make obvious wherein when the number of peaks selected from the signal level of the test sound stored in the storage portion is smaller than the number of channels of the multi-channel surround-sound, the beam setting portion sets the sweep angles of the selected peaks as beam output angles of one or more channels of the multi-channel surround-sound, and sets sounds of channels other than the channels for which the beam output angles are set, as direct sounds to be output to be propagated directly to the listening position. Regarding claim 6, the prior art or combination thereof fails to disclose or make obvious an input portion that accepts an input of installation position information of a body of the speaker array apparatus; wherein the beam setting portion selects a plurality of peaks

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from the signal level of the test sound stored in the storage portion based on the installation position information of the body.

Regarding claim 7, the prior art or combination thereof fails to disclose or make obvious wherein the test sound sweep portion modulates the signal level of the test sound with an envelope having a maximum at the center of a sweep range of the audio beams.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEVONA E. FAULK whose telephone number is (571)272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Devona E. Faulk/
Primary Examiner, Art Unit 2614